



Factors causing sports injuries and complications of incomplete treatment

Introduction A physically active lifestyle is important for all age groups. Reasons to participate in sports and physical activity are many, such as pleasure, relaxation, competition, socialisation, maintenance and improvement of fitness and health. Regular physical activity reduces the risk of premature mortality in general and of coronary heart disease, hypertension, colon cancer, obesity and diabetes mellitus in particular. However, sports participation also carries a risk for injuries, which may in some cases lead to permanent disability. People who participate in sports are more likely than others of the same age to have muscle and tendon injuries and bone fractures. This certainly does not mean we should avoid sports - the health benefits far outweigh the cost in terms of sports injuries.

Causes of sports injuries

Sports injuries are most commonly caused by poor training methods; structural abnormalities; weakness in muscles, tendons, ligaments and unsafe exercising environments. The most common cause of injury is poor training. For example, muscles need 48 hours to recover after a workout. Increasing exercise intensity too quickly and not stopping when pain develops while exercising also causes injury.

Factors causing sports injuries

A multitude of situations can result in a sports-related injury. Being aware of the risk factors goes a long way in preventing them. Strengthening muscles, getting proper rest and working at the proper pace are essential in staying healthy. A look at the causes of the most common sports injuries paints a clear picture of the main culprits behind them.

Overuse

Overuse or repetitive movements may be the number-one cause of sports injuries. Runners, swimmers and tennis players are particularly susceptible to overuse injuries, including tennis elbow, tendinitis, shin splints and shoulder impingement.

Falls

Any athlete can fall in the midst of an activity. In addition to the obvious breaks that can occur from a fall, wrist sprains are common. Our natural instinct when falling is to put our hands down to break our fall. Our wrists bear weight, which can easily stretch or tear a ligament.

New or Increased Activity

Starting a new activity or increasing level of activity too quickly can also result in plantar fasciitis or lower back pain. If new exercise or sport has begun, previously unused muscles may be employed or it may increase the work of other muscles. A cramp is a common result of this.

Fatigue

Tired muscles are a common cause of muscle pulls. Resting between activities is essential to preventing muscle pulls.

Poor Warm-up

Warming-up delivers blood and oxygen to the various muscles, allowing them to work more efficiently. Muscle pulls and cramps are often the result of jumping into an activity without properly easing the muscles into it.

Impact

Hard impacts are another culprit behind injuries such as shin splints and plantar fasciitis. Hard surfaces cause a more jarring impact on an athlete's feet, legs, hips and back.

Unilateral Movements

Lower-back pain plagues some golfers and tennis players, among others. Because these activities require certain movements by only one side of the body, muscles are working on one side without doing equal work on the other. This can result in weaker muscles on the less active side, the most common cause of lower back pain.

Technique or Posture

Neck pain, including spasms and pulls, is often the result of something as simple as moving our head awkwardly to see a ball or an opponent. Cyclists may experience neck pain after riding with racing handlebars.

Measures to reduce the risk of sports injury:

- Plan to have at least 1 day off per week and at least one month off per year from training for a particular sport to allow the body to recover.
- Wear the right gear. Players should wear appropriate and properly fit protective equipment such as pads (neck, shoulder, elbow, chest, knee, and shin). Young athletes should not assume that protective gear will prevent all injuries while performing more dangerous or risky activities.
- Strengthen muscles. Conditioning exercises during practice strengthens muscles used in play.
- Increase flexibility. Stretching exercises after games or practice can increase flexibility. Stretching should also be incorporated into a daily fitness plan.
- Use the proper technique. This should be reinforced during the playing season.
- Take breaks. Rest periods during practice and games can reduce injuries and prevent heat illness.
- Play safe. Strict rules against headfirst sliding (baseball and softball), and spearing (football), and checking in hockey should be enforced.
- Stop the activity if there is pain.

Complication of incomplete treatment of sports injuries

Stress fractures

- Stress fractures are common sports injuries. They are breaks in the bone but can be thought of as cracks - sometimes full-thickness cracks - rather than complete breaks in which the two parts of the bone separate.
- Stress fractures are overuse injuries. They occur when muscles are fatigued, weakened or injured, and cannot absorb added shock. Eventually the overload of force is transferred to the bone where it causes a tiny crack..

Foot and heel pain

- This often arises from the tendons in the foot and heel, which may be strained by overuse or by sudden twisting and imbalance.
- One common condition is plantar fasciitis: the plantar fascia is a thick band of tissues stretching under the foot.

Ankle pain

- The Achilles tendon is a strong tendon which connects the muscles of the calf to the heel. It is a common source of pain in the back of the heel and ankle, leading to Achilles tendinopathy or Achilles tendonitis.
- The Achilles tendon is also the most commonly ruptured tendon: it can occur partially or completely. Achilles tendon rupture is usually caused by overstretching of the tendon.

Lower leg pain

This is most commonly due to:

- Muscle strains or cramps. These are often caused by a combination of heat, lack of fluids in the body (dehydration), and inadequate warming.
- Shin splints. This is a term for pain in the shin bone relating to exercise. It occurs when the edge of the shin bone becomes inflamed due to the muscles and tendons pulling on it during exercise. This often happens after running or jumping, or sports with sudden stops and starts, such as basketball or football. Sudden increases in running distance or pace can also trigger it. Shin splints can sometimes form mini stress fractures (surface cracks in the bone). These may occur after landing with particular force, and can be extremely painful.

Knee and thigh pain

Injuries to the knee and thigh are particularly common in sports such as football which involve running and twisting. This can strain the strong supporting ligaments inside the knee, leading to:

- Knee cartilage injuries.
- Knee ligament injuries.

Anterior knee pain

Anterior knee pain means pain in the front of the knee. It is common in teenagers and young sporty adults.

- It is often called patellofemoral pain syndrome (PFPS) and is often an overuse injury. It can relate to abnormalities in the run, caused by a poor line-up of the legs when running.
- Osgood-Schlatter disease is another cause of knee pain in young people (adolescents). The condition is aggravated by exercise; it causes a swelling and tenderness of the tibial tubercle, which is the bulge of bone at the front just below the knee.

Lateral and medial knee pain

Lateral knee pain means pain on the outer side of the knee. Medial knee pain means pain on the inner side of the knee. Common causes include:

Iliotibial band syndrome: Iliotibial band syndrome is inflammation of the iliotibial band occurs on the outside of the knee only. This tight band of muscle and tendon on the outside of the knee can rub against the outside of the knee joint. It is an overuse injury which is difficult to treat without physiotherapy advice.

Posterior knee pain

- Hamstring injury: can be a persistent (chronic) injury. It usually involves the part of the hamstring called the biceps femoris and is brought on by running downhill, kicking and sprinting. It is also possible to tear the hamstring suddenly. Depending on how big the tear is, this can be very sore, cause bruising and stop one from playing for several weeks.

Bottom (buttock) and hip pain

- Pain in the bottom in runners may come from joints, ligaments, tendons and the large gluteal muscles. These may be inflamed or, in the case of the muscles, also torn. It is also possibly for runners to develop small cracks (stress fractures) in the thigh bone, although this is uncommon. Injuries can be chronic or sudden, and they are common in sports involving running, twisting and kicking.

Lower back pain

- Pain in the lower back is often due to underlying back problems which are made worse by sport. However, strain on the lower back is severe in those lifting weights, particularly if the technique is not excellent.
- Lumbar instability occurs when part of the lower back has too much movement. Lower back pain is very common in distance runners who lack core strength in the muscles around the trunk which support the back. Core strengthening exercises to support the back can be helpful.

Tummy (abdominal) pain

Abdominal pain in sport may be due to muscular strain. Vigorous exercise may lead to pains due to stitch. Stich is a word for pain from the muscle when breathe with (the diaphragm), particularly if we are not warmed up.

Chest pain

- Chest pain when exercising is often muscular, due to the muscles of the chest wall working hard when breathing hard. In some sports such as weightlifting and rowing, pain is due to those muscles working hard due to lifting or pulling.

Upper back and neck pain

Pains in the neck and upper back are most commonly muscular and due to poor posture.

Shoulder pain

The most common causes of shoulder pain in sports are swelling (inflammation), and pulls and tears to the muscles around the shoulder. The rotator cuff muscles are four muscles important in rotating and lifting the arm. They are prone to injury when falling or during a sudden powerful movement such as in throwing or paddling a kayak.

- Shoulder dislocation can occur in contact sports and swimming. It causes severe shoulder pain.
- A broken collar bone or a sprain to the joint between the collar bone and the shoulder can occur if you fall on to the shoulder or an outstretched arm.
- Injuries, strains and tears to the biceps and triceps muscles can occur in those who use their arms in sport.

Elbow pain

- Pain on the outside of the elbow (lateral elbow pain) is commonly due to tennis elbow. It is an overuse injury. It is typically seen in sports (like tennis) involving repeated bending back of the wrist against resistance. Weight training can also be a cause.
- Pain on the inside of the elbow (medial elbow pain) is commonly due to golfer's elbow. This is typically caused by repeatedly bending the wrist inwards against force, such as when using a golf club.

Wrist and hand pain

Sudden wrist injuries may be fractures or sprains, or overuse injuries such as wrist tendonitis and carpal tunnel syndrome.

Conclusion

Sports injuries are an unfortunate and prevalent side effect to engaging in athletic competition. If not treated properly, injuries suffered while playing a sport could not only hinder your ability to compete but could also have devastating long and short term effects on your body. Small, seemingly insignificant injuries could snowball into injuries that could end ones athletic career early. Many sports have injuries and are very specific to that sport or occur in only a few sports. Younger athletes should be educated and protected from the degradation of specific body areas due to the stresses of sports injuries.